HONEY BADGER PROJECT
Project File Document W-037
Western Toad Habitat Analysis
October 6, 2021

## Habitat Relationships

Western or boreal toad breeding habitat includes shallow, quiet water in lakes, marshes, bogs, ponds, wet meadows, slow-moving streams, backwater channels of rivers and other persistent water sources (Maxell 2000). Young toads are restricted in distribution and movement by available moist habitat, while adults can move several miles and reside in marshes, wet meadows, or forested areas. Toads hibernate in the winter in habitats that maintain a high humidity and above-freezing temperatures. Areas that provide shelter for hibernating toads include rodent burrows, beaver lodges, and beaver dams (Loeffler 1998). Since this species depends on wetlands to breed, the reduction of wetlands or adverse impacts on wetlands could potentially have detrimental effects on western toads. Males appear to have a home range within 300 meters of breeding sites and show high site fidelity (Loeffler 1998). Therefore, breeding habitat is likely the most important factor in maintaining toad presence in an area. It is important that toads be able to move among their seasonal habitats of breeding ponds, summer range and overwinter refugia (Loeffler 1998). The biggest potential barrier to their movement is roads. Vehicle traffic has been identified as a risk factor for the western toad (Maxell 2000). Juvenile toads are vulnerable to being killed by motorized vehicles when they are dispersing from their natal ponds.

## Affected Environment

Based on habitat needs as described in the literature, the mesic nature of much of the forests of the IPNF indicate that toads have opportunities to find persistent small water sources for breeding and could successfully disperse through moist forest to breeding and overwintering habitat. There are several areas of riparian complexes, including freshwater forested/shrub and emergent wetlands, in the project area that could provide potential breeding habitat for toads. There are also many mesic timbered stands present that could provide suitable habitat. Within the project area breeding habitat is probably confined mainly to the shrub/meadow/stream complexes along creeks; and within shallow edges of any slow-flowing, low-gradient creeks or persistent roadside-ditch pools that exist in the area. Temporary pools from snowmelt and rainwater may also be used for egg-laying, but these would have to be warm enough and persist long enough for tadpoles to metamorphose. It is possible western toads are present in the action area, although no there are no known observations of this species within the project area.

## Rationale for Determination of Effects

The proposed action may impact individual toads during project implementation. However, this risk is considerably reduced by project design including timing restrictions (if needed), Inland Native Fish Strategy (INFS) buffers and Best Management Practices (BMPs). All fish-bearing streams would be buffered by 300 feet on a side. Perennial streams and wetlands larger than one acre in size are buffered from activity by at least 150 feet. Smaller springs, seeps, and wetlands would be buffered by at least 100 feet if any are identified near or within proposed harvest units. As a result, the potential for disturbance to potential breeding habitat (areas with still water) and reproduction is discountable. Post project, the open road system in the area would be restored to its pre-project level; so there would be no change to the risk of potential direct mortality from vehicles. Other present and reasonable foreseeable activities within the analysis area (ie. public activities, fire suppression, and road and trail maintenance) would not affect breeding habitat, and potential mortality to individual toads from traffic related to these activities would be minor and is accounted for by assessing motorized access. As western toads may disperse to and travel

through upland areas, the proposed activity has the potential to disturb individuals. While the action alternative may affect individual toads (if present), based on the design features and no consequential change in public motorized access, it is not expected to have a measurable difference at the population level.

Ongoing activities in the project area that likely will continue include firewood gathering, recreational activities, fire suppression and remaining fuels project activities authorized under more recently completed NEPA decisions. Activities that occur in western toad habitat have the potential to disturb this species. As these activities are occurring and are expected to continue in the future, it is unlikely that this species would avoid these areas to a greater degree than what may be currently occurring. When these effects are combined with the temporary disturbance associated with the proposed Honey Badger Project, the cumulative impact on western toad is expected to be insignificant.

Consequently, the Honey Badger proposed action in conjunction with past, present and reasonably foreseeable actions ***may impact western toads or their habitat, but would not likely contribute to a trend towards Federal listing or cause a loss of viability to the population or species.***

LIST OF REFERENCES CITED

Loeffler, C. (ed.). 1998. Conservation plan and agreement for the management and recovery of the southern Rocky Mountain population of the boreal toad (*Bufo boreas boreas*). Boreal Toad Recovery Team and Technical Advisory Group. 80 p.

Maxell, B.E. 2000. Management of Montana's amphibians: a review of factors that may present a risk to population viability and accounts on the identification, distribution, taxonomy, habitat use, natural history, and the status and conservation of individual species. Report to USFS Region 1, Order Number 43-0343-0-0224. University of Montana, Wildlife Biology Program. Missoula, Montana. 161 p.

Susan Stanley, Wildlife Biologist 10/6/21